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**Question block created by wizard**

**This exam contains 32 questions**

1. According to the basic rules, calculate:  $2+8:4\cdot3-5 =$ 
  - a. -2
  - b. 2,5
  - c. 3
  
2. Which statement is correct? 5 divided by 8 is..
  - a. 0,0625
  - b. 0,625
  - c. 0,125
  
3. Calculate:  $68182 : 73 =$ 
  - a. 9340
  - b. 934
  - c. 0,934
  
4. Calculate  $\frac{3}{8} : \frac{1}{5}$ 
  - a.  $\frac{3}{40}$
  - b.  $1\frac{7}{8}$
  - c.  $\frac{8}{15}$
  
5. 11,43 cm = ..... inch
  - a. 4,5
  - b. 29,8
  - c. 34,3
  
6. The area of a triangle with a height of 3 cm and a base of 4 cm is .....
  - a. 12 cm<sup>2</sup>
  - b. 24 cm<sup>2</sup>
  - c. 6 cm<sup>2</sup>

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7.  $^2\sqrt{81} =$

- a. 3
- b. 9
- c. 8

8.  $8^3 =$

- a. 64
- b. 512
- c. 24

9. Calculate:  $2x \cdot 3y - 5x \cdot 4y$

- a.  $-14xy$
- b.  $-120xy$
- c.  $-14$

10. Calculate:  $ab / d + d / c =$

- a.  $ab + 1 / c$
- b.  $ab + d$
- c.  $(abc+d^2) / (cd)$

11. Calculate:  $\frac{12x}{y} : \frac{-6y}{x} =$

- a.  $-y^2 / 2x^2$
- b.  $-2$
- c.  $-2x^2 / y^2$

12. Calculate:  $^{12x} / y - (^{-6y} / x) =$

- a.  $(12x^2 + 6y^2) / (xy)$
- b.  $(12x^2 - 6y^2) / (xy)$
- c.  $(12x + 6y) / (xy)$

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**13.** Calculate:  $-3(a+b) =$

- a.  $-3a+3b$
- b.  $-3a-3b$
- c.  $3a-3b$

**14.** Calculate:  $(a+b) \cdot (a-b) =$

- a.  $a^2 - 2ab - b^2$
- b.  $2ab-b^2$
- c.  $a^2-b^2$

**15.** Calculate:  $\frac{1}{3} a - \frac{1}{4} a =$

- a.  $\frac{1}{12} a$
- b.  $-\frac{1}{12} a$
- c.  $-\frac{1}{4} a$

**16.** Calculate:  $\frac{1}{6} a : \frac{1}{3} b =$

- a.  $\frac{a}{2b}$
- b.  $\frac{1}{18} ab$
- c.  $\frac{ab}{18}$

**17.** Rearrange according to the rules of linear equations:  $5x - 5 = -2x + 3x + 15$

- a.  $6x = 10$
- b.  $4x = 20$
- c.  $6x = 20$

**18.** Solve according to the rules of linear equations:  $4(2d - 8) = 3(4d - 16)$

- a.  $d = 4$
- b.  $d = -4$
- c.  $d = 2$

**19.**  $\sqrt[3]{8} =$

- a.  $8 : 3 = 2\frac{2}{3}$
- b.  $2$
- c.  $8 : \frac{1}{3} = 24$

20.  $10011_{(2)} = \dots\dots\dots(10)$

- a. 18
- b. 20
- c. 19

21. Solve:  $x^2 - 5x - 14 = 0$

- a.  $x = -7$  or  $x = 2$
- b.  $x = 7$  or  $x = -2$
- c.  $x = 7$  or  $x = 2$

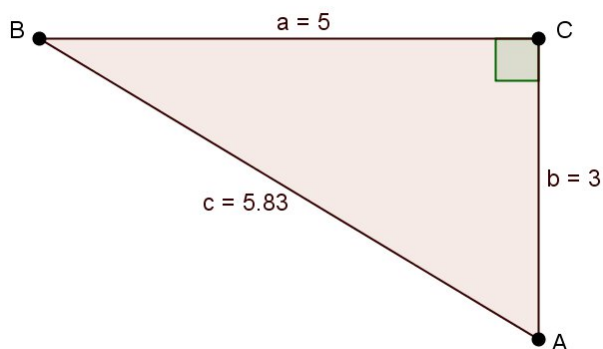
22. We can write:  $\log(AB) =$

- a.  $\log(A) \times \log(B)$
- b.  $\log(A) - \log(B)$
- c.  $\log(A) + \log(B)$

23. The cosin of an angle is:

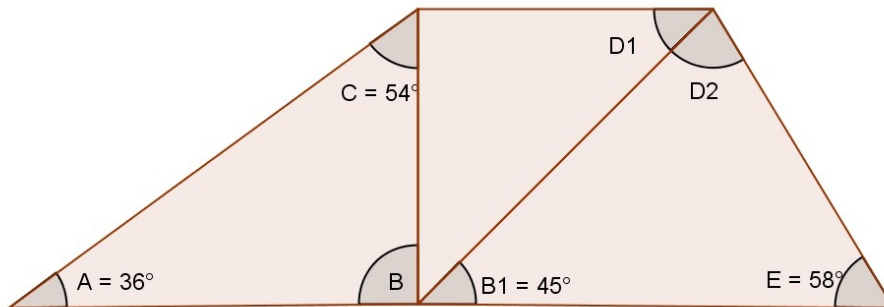
- a. adjacent divided by the opposite.
- b. adjacent divided by the hypotenus.
- c. opposite divided by the hypotenus.

24. The cosin of angle C is?



- a. 0
- b.  $\frac{3}{5}$
- c. 1

25. Determine the sum of the angles  $D1 + D2$  ?

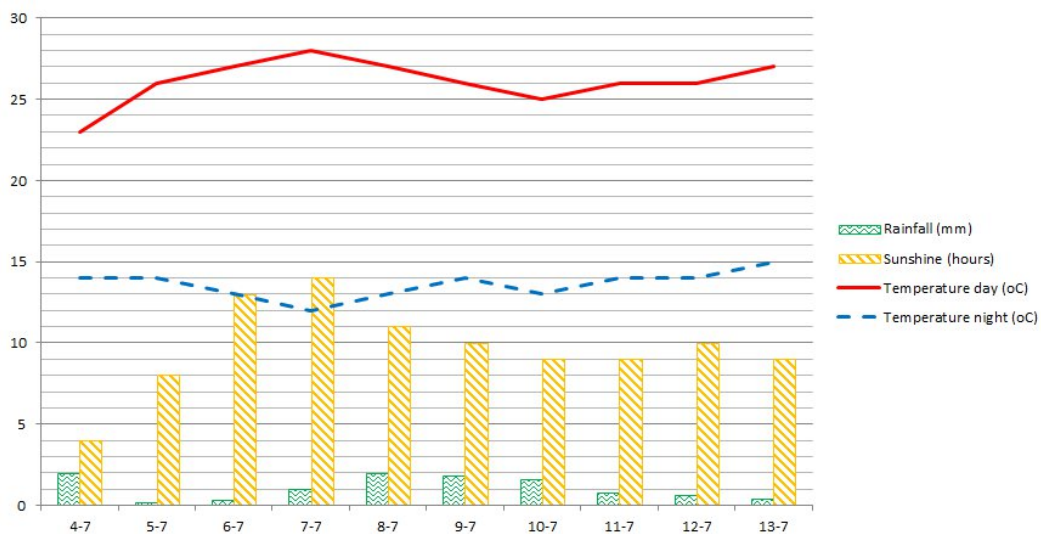


- a.  $122^\circ$
- b.  $121^\circ$
- c.  $120^\circ$

26. Equation:  $y = 2x + 3$

- a. The number 2 represents the slope of the graph.
- b. The number 2 represents the point of the intersection with the y-axis.
- c. The number 2 represents the point of the intersection with the x-axis.

27. Get the lowest night temperature in the graph.

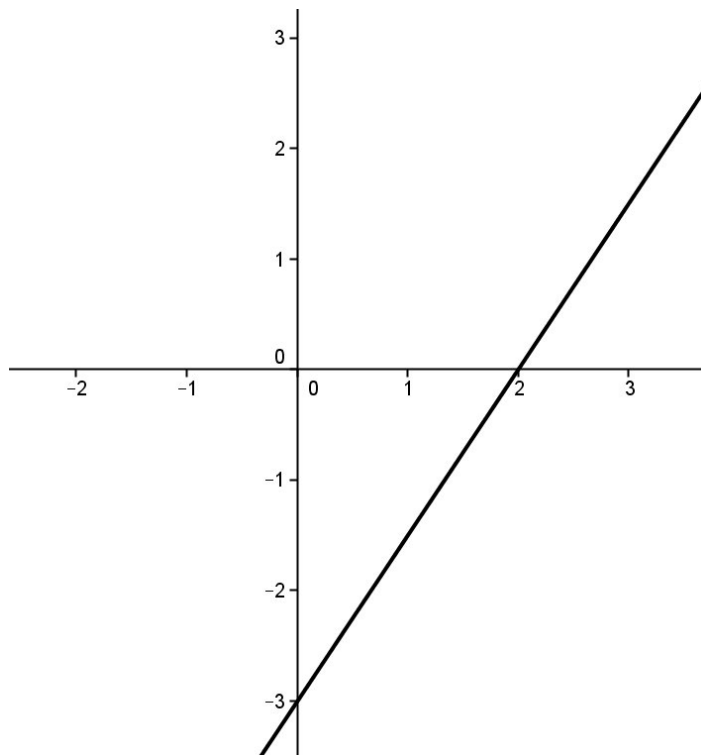


- a.  $12^\circ\text{C}$
- b.  $15^\circ\text{C}$
- c.  $14^\circ\text{C}$

**28.** Calculate the slope of the straight line ( $y=ax+b$ ) that passes through the points (2,3) and (5,9).

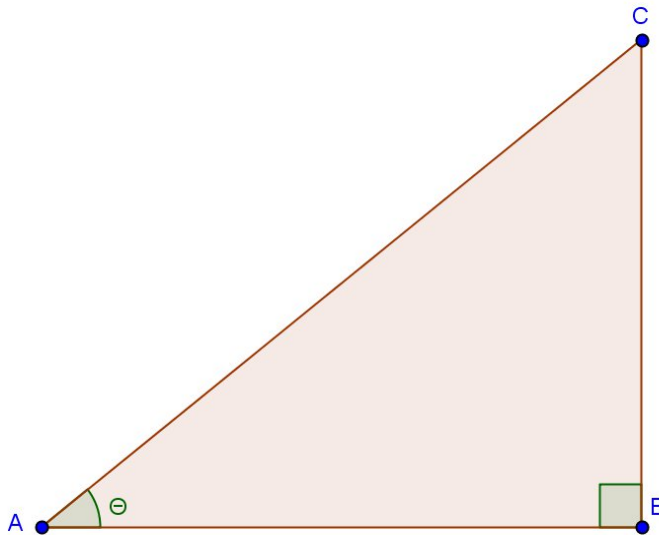
- a.  $a = 2$
- b.  $a = -2/6$
- c.  $a = 0,5$

**29.** Determine the function of the graph in the figure below.



- a.  $y = 1,5x - 3$
- b.  $y = 1,5x + 3$
- c.  $y = -1,5x - 3$

30.  $\sin \theta = 4 / 6,4$ . Calculate the adjacent.



- a. 3,2
- b. 5
- c.  $\sqrt{57}$

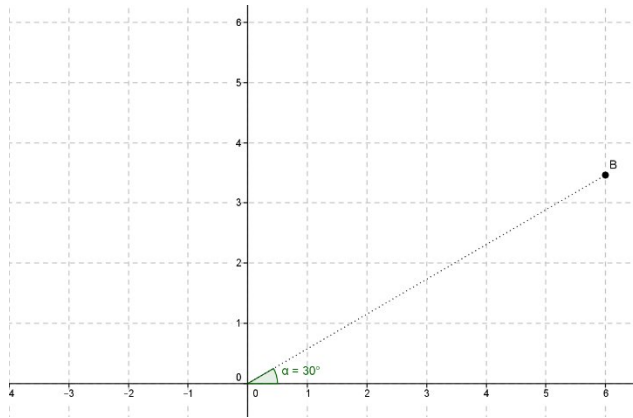
31. Gelderland is the largest province of the Netherlands.

Calculate the average area per city in Gelderland, use the table.

Province	Number of inhabitants	Area (km <sup>2</sup> )	Population density (inh/km <sup>2</sup> )	Number of cities
Groningen	583942	2325	251	23
Friesland	646257	3325	194	24
Drenthe	488576	2636	185	12
Overijssel	1140652	3323	343	25
Gelderland	2026578	4968	408	54
Utrecht	1263572	1382	914	26
Flevoland	401791	1413	284	6
Noord-Holland	2761929	2664	1037	48
Zuid-Holland	3600011	2805	1283	60
Zeeland	380726	1784	213	13
Noord-Brabant	2488751	4913	506	66
Limburg	1117941	2149	520	33

- a. 0,01 km<sup>2</sup>
- b. 268272 km<sup>2</sup>
- c. 92 km<sup>2</sup>

32. Determine cartesian coordinates of point B in the drawing.



- a.  $(6; 6\sqrt{3})$
- b.  $(6\sqrt{3}; 6)$
- c.  $(6; 6/\sqrt{3})$